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## **ABSTRACT**

An improved two layer electrode structure is fabricated on a surface. According to one aspect of the invention, the first layer of the electrode structure is designed to provide electrical contact to a fluid electronic material and the second layer of the electrode structure is formed so as to constrain the fluid electronic material in a precise pattern. Alternatively, the second layer of the two-layer electrode structure includes a low surface energy material to further assist in constraining the fluid electronic material to the desired pattern. In another alternative, the first layer of the electrode structure includes a transparent electrode material, that is coupled to an electro-optical device. The second layer of this electrode structure includes a high conductivity material that is coupled to the first layer of the electrode structure in an area not directly over the electro-optical device to improve the conductivity of the transparent electrode structure.